

In the Drawings:

Applicants propose to amend Figure 3A as indicated in the enclosed Substitute Drawing

Page 4/25.

REMARKS

In the office action, the drawings and specification were objected to, claims 1, 5, 6 and 9 - 11 were rejected under 35 U.S.C. §103(a) over French Patent No. 2,452,193 (to Kant et al.) in view of U.S. Patent No. 6,664,666 (to Corcoran), claims 2 - 4, 7 and 8 were indicated as being allowable if rewritten in independent form, and claims 12 - 17 were allowed.

Responsive to the office action, the specification and drawings are amended. Claim 1 is also amended and new claim 18 is added.

The Kant et al. reference discloses a spherical electric motor for controlling a ball joint about a center of rotation. The spherical electric motor includes a spherical rotor as well as a two part stator that provides spherical internal surfaces that act as a bearing surface for the exterior surface of the rotor. The Kant et al. reference does not appear to disclose a magnetic element fixedly attached to the movable member.

The Corcoran reference discloses a force feedback motor assembly that provides output in two degrees of freedom. The force feedback motor assembly is disclosed to be used with a joystick and includes a partially spherical rotor having magnets thereon, and partially spherical stator portions near which the rotor magnets may be moved through actuation of the stator coils.

Claim 1 is directed to an apparatus that includes a movable member, a fixed member, a magnetic element attached to the movable member, a magnetically permeable stator element and at least one stator current coil for inducing an electromagnetic force within the stator element in response to a current passing therethrough.

There is no teaching or suggestion in either the Kant et al. reference or the Corcoran reference of modifying the rotor of Kant et al. to include magnets and as well as a stator coil for inducing an

electromagnetic force within the stator element in response to a current passing therethrough. Applicants respectfully submit therefore, that claim 1 is not disclosed, taught or suggested by the Kant et al. reference in view of the Corcoran reference. Claim 1, therefore, is considered to be in condition for allowance. Each of claims 5, 6, 9 - 11 and 18 depend directly or indirectly from claim 1 and are, therefore, also submitted to be in condition for allowance.

Applicants respectfully submit that each of claims 1 - 18 is in condition for allowance. Favorable action consistent with the above is respectfully requested.

Respectfully submitted,

May 18, 2005



William E. Hilton
Registration No. 35,192
Gauthier & Connors, LLP
225 Franklin Street, Suite 3300
Boston, Massachusetts 02110
Telephone: (617) 426-9180
Extension 111